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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,689	12/14/2001	GopalaKrishna Reddy Kakivaya	MSFT-0737/183219.1	5665
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WOODCOCK WASHBURN LLP (MICROSOFT CORPORATION) ONE LIBERTY PLACE - 46TH FLOOR PHILADELPHIA, PA 19103				
			EXAMINER	
			LE, DEBBIE M	
			ART UNIT	PAPER NUMBER
			2168	

DATE MAILED: 02/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/017,689	<b>Applicant(s)</b> KAKIVAYA ET AL.	
	<b>Examiner</b> DEBBIE M. LE	<b>Art Unit</b> 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2005.
- 2a) ☒ This action is **FINAL**.      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-15, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asami et al (US patent Application No. 2002/0123991 A1) in view of Todd (US Patent Application No. 2001/0047352 A1).

As per claim 1, Asami discloses a method for querying a data structure in a distributed computing environment, comprising:

**preparing a query specifying a data type of a variable and a value contained within said data structure** (as generating a query statement by defined data types along with data structures) (see par. 0022, 0050, 0058);

**sending the query to an object** (as a query device 150 issues query statements to a DBMS 100) (see par. 0008), **wherein said object determines whether maintains a data structure having a variable of the data type specified and whether the variable contains the specified value** (as a database management system interpret and execute a query statement expresses, or the data type being queries is evaluated to see whether it is a newly added data type or not) (see par. 0026).

Asami does not explicitly teach wherein said data structure is one of multiple data formats and sending the query to an in-memory. However, Todd discloses **data structure is one of multiple data formats** as wire-format or second message in a prescribe format suitable for that application, that is response to the query **and sending the query to an in-memory** as a memory for storing data in a data structure for storing a plurality of message or data (parg. 0035, page 3, parg. 0031, lines 1-15). Thus, it would have been obvious to one of ordinary skill on the art at the time invention was made to combine the teachings of the cited references to provide said data structure is one of multiple data formats and sending the query to an in-memory as disclosed by Todd because it would enable Asami's system avoid the processing overheads typically incurred in the prior art should such a query not be forthcoming. Therefore, the processing overheads of a messages system can be significantly reduced.

As per claim 2, Asami teaches wherein the query is specified as a text string (see par. 0048).

As per claim 3, Asami teaches wherein the data structure is stored as one of XML, database tables, and a programming language data structure (see par. 0050-0052).

As per claim 4, Asami teaches receiving a data value from at least one digital device indicative of the storage of the value in said digital device (see par. 0054-0055).

As per claim 5, Asami teaches the digital device comprises one of a personal computer, personal digital assistant, video tape recorder, a display device, and an MP3 player (see par. 0063-0066).

As per claim 6, Asami teaches wherein the query is sent in the form of a message over a data network (see par. 0047, 0051).

Claim 7 is rejected by the same rationale as state in claim 1 arguments.

As per claim 8, Asami teaches a system for determining the status of a device, comprising:

**a query generation mechanism for generating a type query specifying a data type and a value** (as query statement generating module 204 uses the query information entered via the query input module 202 to generate a query statement to be issued to the database management system 200) (see par. 0022, 0058);

**a query transmission mechanism for transmitting the type query and the value over a communication network to at least one digital device** (as a query device 150 issues query statements to a DBMS 100 via a network) (see par. 0008,

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0047), **whereby the digital device compares the data type to a data type of a data structure that it maintains and compares the value to a value stored in the data structure** (as a database management system interpret and execute a query statement expresses, or the data type being queries is evaluated to see whether it is a newly added data type or not) (see par. 0026).

Asami does not explicitly teach transmitting the type of query to said data structure that it maintains in-memory and wherein said data structure is one of at least two different formats. However, Todd discloses transmitting **the type of query to said data structure that it maintains in-memory** as a memory for storing data in a data structure for storing a plurality of message or data **and wherein said data structure is one of at least two different formats** as wire-format or second message in a prescribe format suitable for that application, that is response to the query (parg. 0035, page 3, parg. 0031, lines 1-15). Thus, it would have been obvious to one of ordinary skill on the art at the time invention was made to combine the teachings of the cited references to provide transmitting the type of query to said data structure that it maintains in-memory and wherein said data structure is one of at least two different formats as disclosed by Todd because it would enable Asami's system avoid the processing overheads typically incurred in the prior art should such a query not be forthcoming. Therefore, the processing overheads of a messages system can be significantly reduced.

Claims 9-12 have similar limitations as claims 2-5; therefore, they are rejected under the same subject matter.

As per claim 13, Asami discloses a method for use in a digital device in a distributed system, comprising:

**coupling the digital device to a communication network** (as DBMS 200 connects to a query device via a network) (see Fig. 1, Fig. 3, # 405, par. 0047);

**storing a value in a data structure in said digital device, said data structure defined by a programming language data type definition** (as data definition 210 represents user-defined type definition and implementations (programs), an example of a user-defined type is a structured document type such as SGML) (see par. 0051);

**receiving a query specifying a query data type and a query value** (as a query device 150 issues query statements to a DBMS 100 via a network) (see par. 0008, 0047);

**comparing the query data type to the data structure data type and the query value to the value stored in the data structure** (as the data type being queried is evaluated by searching the query component information for a particular data type belonging to the data type being queried, and when the data type is found) (see par. 0026-0027);

**indicating whether the query data type matches the data structure data type and whether the query value matched the value stored in the data structure** (as the data type being queries is evaluated to see whether it is a newly added data type or not, for instant, when the query component querying of data belongs to the data type being queries is found) (see par. 0025, 0027).

Asami does not explicitly teach in-memory data structure. However, Todd discloses **in-memory data structure** as a memory for storing data in a data structure for storing a plurality of message or data (page 3, parag. 0031, lines 1-15, parag. 0035). Thus, it would have been obvious to one of ordinary skill on the art at the time invention was made to combine the teachings of the cited references to provide in-memory data structure as disclosed by Todd because it would enable Asami's system avoid the processing overheads typically incurred in the prior art should such a query not be forthcoming. Therefore, the processing overheads of a messages system can be significantly reduced.

As per claim 14, Asami teaches wherein the programming language is one of a procedural language and an object oriented language (see par. 0012-0013).

As per claim 15, Asami teaches wherein the programming language is one of an interpreted language and a compiled language (see par. 0007).

Claims 17-19 have similar limitations as claims 2, 5-6; therefore, they are rejected under the same subject matter.

Claim 20 is rejected by the same rationale as state in claim 13 arguments.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asami et al (US patent Application No. 2002/0123991 A1) in view of Todd (US Patent Application No. 2001/0047352 A1), further in view of Gombocz et al (US Patent Application No. 2002/0156792 A1).



As per claim 16, Asami and Todd do not explicitly teach wherein the object oriented language is one of JAVA, C#, CLR, and C++. However, Gombocz teaches **wherein the object oriented language is one of JAVA, C#, CLR, and C++** (see par. 0059). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of the cited references to implement the step of the program language is a object oriented and the object oriented is one of JAVA, C#, CLR, and C++ as disclosed by Gombocz because the object-oriented language makes it easier to provide a second language distinct from the first language, such as C++, Jave, XML and other markup language; therefore, it is readily apparent to anyone skill in the art that other enabling software codes for enabling techniques also be used, as suggested by Gombocz (see par. 0059).

### ***Conclusion***

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEBBIE M. LE whose telephone number is (571) 272-4111. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JEFFREY GAFFIN can be reached on (571) 272-4146. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Debbie Le

Feb. 7, 2006

DEBBIE M LE  
Examiner  
Art Unit 2168

Primary Examiner